

THE RELATIONSHIP BETWEEN SCORES ATTAINED ON CERTAIN
PSYCHOMETRIC INSTRUMENTS AND COUNSELOR EFFECTIVENESS

A THESIS

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CHAPTER I

INTRODUCTION

Rationale.--Selection of appropriate individuals for counseling positions has long posed a dilemma for educators. Twenty years ago, selection of counselors was done largely by school administrators through placing teachers in counseling positions. These positions were often viewed as rewards for teachers who did well in teaching, who were kind and sympathetic to students, and who were cooperative with administrators. Although these counselors were often sincere and concerned with the total school program, in many cases their effectiveness was limited by their lack of professional education in the area of guidance and counseling.

Even though these procedures served at that time to provide some functionaries, both counselor educators and school administrators were not satisfied with selection procedures. An increasing awareness on the part of the American public as to the values of counseling and guidance in the educative process served to heighten the demand for competent, professionally educated counselors.

The National Defense Education Act of 1958 made it possible for counselor educators to expand their programs by bringing both practicing counselors and persons aspiring to be counselors into programs

which sought to provide professional education for counselor education students. The increased number of people seeking admission to counselor education programs provided educators further cause to question what would be most essential in the selection and development of effective counselors.

In NDEA Institutes the primary criteria include: a Bachelor's degree from an accredited institution, teaching experience, recommendations, at least one graduate course in the area of guidance and counseling, and acceptance into the graduate school offering the program. Most universities offering graduate work in counseling and guidance involve the use of scores on certain psychometric instruments in the selection process. Which instruments might be most helpful in selecting individuals who would become effective counselors continues to be a source of inquiry for counselor educators.

Demand being greater than the supply of people and opportunities, counselor educators must become psychologically more efficient in the selection of prospective counselors. The increasing student population, the demands placed upon students by society, and the complexity of the world in general all emphasize the need for not only a quantitative increase in counselors, but also for increasing competence and effectiveness on the part of counselors presently in the field and those who are new to the guidance and counseling profession. The full impact of psychological knowledge must be brought to bear upon the selection of individuals for counselor education programs.

Evolution of the problem.--The writer's interest in this research was an outgrowth of her membership in the 1965-1966 Counseling and

Guidance Institute at Atlanta University. The writer found that Atlanta University, like most universities offering graduate work in counseling and guidance, involved the use of scores on the Graduate Record Examination and/or the Miller Analogies Test in the selection of counselor enrollees.

In raising the question with the director of the institute as to how these scores related to future counselor effectiveness, it was discovered that a larger study of counselor enrollees was to be done, and the writer was encouraged to pursue the question of selection, seeking relationships between rankings of counselor effectiveness and scores attained on all psychological instruments administered to counselor enrollees in the 1965-1966 NDEA Counseling and Guidance Institute at Atlanta University.

Contribution to educational knowledge.--The writer hopes that the findings of this study will make a contribution to counselor educators in their continuing appraisal of selection procedures. The resulting data from this study should reveal whether high scorers on any one or more of the psychological instruments administered to counselor enrollees are judged to be more effective counselors by institute counselor education faculty than their lower scoring fellows.

Statement of the problem.--The problem involved in this study was to determine the relationship between the rankings of counselor effectiveness of the thirty counselor enrollees by the seven members of the counselor education faculty and scores attained by the enrollees on the following psychometric instruments: The Minnesota Multiphasic Personality Inventory, the Ohio State University Psychological

Examination, the Minnesota Teacher Attitude Inventory, Miller Analogies Test, Otis Quick-Scoring Test of Mental Ability, Graduate Record Examination, The Guilford-Zimmerman Temperament Survey, and Edwards Personal Preference Schedule.

Purpose of the study.--The purpose of this study was to test statistically the following null hypotheses:

1. Little or no variability exists in the test scores attained by the thirty enrollees.
2. No differentiation exists in the average rankings of counselor effectiveness of the thirty counselor enrollees.
3. No statistically reliable relationship exists between the scores counselor enrollees attained on each of the psychometric instruments and their rankings of counselor effectiveness as judged by counselor educators.

Limitations of the study.--This study was part of a larger whole, and this portion was limited to the following certain aspects. It was limited to the scores and rankings of the thirty enrollees in the 1965-1966 NDEA Counseling and Guidance Institute at Atlanta University. Both the scores and rankings were coded before the writer received the data so that the confidentiality of individuals' scores would not be violated.

The ranking of the thirty individuals as to counselor effectiveness by the seven members of the institute faculty presented a limitation in that the educators spent varying amounts of time with the institute members. Varying amounts of subjectivity as well as varying degrees of knowledge of the enrollees characterize the ranking procedure.

Definition of terms.--For the purpose of clarity, the following terms were defined:

1. Psychometric or psychological test or instrument - an objective and standardized measure of a sample of behavior.
2. The effective school counselor - The effective public school counselor is a professionally competent person who regards the value and integrity of each individual, as well as his own integrity, in all of his dealings. His philosophy of counseling is an outgrowth of and is consistent with his personal philosophy. An attitude of acceptance and assurance of confidentiality is present in his every counseling relationship. The effective counselor aids students in attaining more self-understanding and self-direction. He can articulate the guidance function to administrators, faculty, and students and can gain cooperation and support for the guidance program. He encourages self-growth in other school personnel. The effective counselor studies the characteristics and analyzes the needs of the student population. He serves as a liaison between the school, the home, and the community.

Locale of the study.--The locale of this study was Atlanta University, Atlanta, Georgia.

Description of subjects.--The subjects in this study were the sixteen females and the fourteen males who comprised the 1965-1966 Counseling and Guidance Institute, Atlanta University, Atlanta, Georgia.

Description of instruments.--Following is a description of the eight psychometric instruments used to gather the data for this study

and a description of the sheet used for ranking counselor effectiveness.

1. Graduate Record Examination - This test is designed for use in evaluating college graduates' qualification for graduate work. The Aptitude Test is pitched at a high level of difficulty. The verbal score is based upon verbal reasoning and reading comprehension items. The quantitative section includes computation, reasoning, and data interpretation. It is recommended as a good measure of high level verbal and quantitative ability. The Advanced Test in Education is exceptionally comprehensive in its treatment of educational problems, including key ideas from the history of education, acquaintance with different points of view and philosophic positions, knowledge of important findings of psychology and measurement, and understanding of the significance of representative policies and practices concerning curriculum content and instructional methodology.¹
2. Miller Analogies Test - This is a well constructed, secure, convenient, single-score test of high difficulty level, consisting of 100 verbal analogy items which cover a broad range of knowledge. It has high reliability in the homogeneous graduate student population, has an unusually high ceiling, and has fairly substantial predictive validity for the criterion of graduate school grades.²

¹Oscar K. Buros, editor, The Sixth Mental Measurements Yearbook (New Jersey: The Gryphon Press, 1965), pp. 461, 698.

²Ibid, p. 472.

3. Otis Quick-Scoring Test of Mental Ability - The Gamma form of the Otis is intended for high school and college. The avowed purpose of the test is to measure mental ability defined as "thinking power or the degree of maturity of the mind." Items depend as little as possible upon schooling except questions on vocabulary and arithmetic reasoning, recognized as being largely measures of achievement.¹
4. The Ohio State Psychological Test - This test yields four scores: same opposites, analogies, reading comprehension, total. It is designed for college-bound high school seniors and college students.²
5. Minnesota Teacher Attitude Inventory - This test is designed to assess pupil-teacher relations. It was developed by administering over seven hundred items to one hundred teachers nominated by their principals as superior. Cross-validation of the resulting 150 item inventory in different groups yielded concurrent validity coefficients of .46 to .60 with a composite criterion derived from principal's estimate, pupils' ratings, and evaluation by a visiting expert. For each statement, respondents mark SA, A, U, D, SD.³

¹Oscar Buros, editor, The Fifth Mental Measurements Yearbook (New Jersey: The Gryphon Press, 1959), p. 362.

²Ann Anastasi, Psychological Testing (New York: The Macmillan Company, 1961), p. 226.

³Ibid., pp. 551-552.

6. Edwards Personal Preference Schedule - This psychological test is designed to assess the relative strengths of 15 manifest needs selected from Murray's need system. The needs associated with each of the EPPS variables are: Achievement (ach), Deference (def), Order (ord), Exhibition (exh), Autonomy (aut), Affiliation (aff), Intracception (int), Succorance (suc), Dominance (dom), Abasement (aba), Nurturance (nur), Change (chg), Endurance (end), Heterosexuality (het), and Aggression (agg).¹
 7. Guilford-Zimmerman Temperament Survey - This psychological inventory yields separate scores for 10 traits, each score based on 30 different items which are expressed in the form of affirmative statements, rather than as questions. The traits are: General Activity (G), Restraint (R), Ascendancy (A), Sociability (S), Emotional Stability (E), Objectivity (O), Friendliness (F), Thoughtfulness (T), Personal Relations (P), and Masculinity (M).²
 8. Minnesota Multiphasic Personality Inventory - According to research findings, this psychological inventory can differentiate quite well between those who do and do not have emotional and adjustmental problems in a wide variety of settings and can thus serve as an excellent screening device. It has four validity scales: Lie Score (L), Validity Score (F), K Score
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¹Buros, The Sixth Mental Measurements Yearbook, p. 87.

²Buros, The Fifth Mental Measurements Yearbook, p. 375.

(K), and Question Score (?). The clinical scales are: Hypochondriasis (Hs), Depression (D), Hysteria (Hy), Psychopathic Deviate (Pd), Interest (Mf), Paranoia (Pa), Psychasthenia (Pt), Schizophrenia (Sc), Hypomania (Ma), and Social I. E. (Si).¹

9. Counselor Effectiveness Ranking Sheet - This form, given to each member of the Counselor Education faculty, contained the previously stated definition of the effective school counselor to serve as a general guide in the ranking of each Institute member. The thirty names on the sheet were to be assigned ranks from high (1) to low (30).

Method of research.--The normative-survey method was employed, using specific techniques of statistical analyses.

Research procedures.--The operational steps employed in conducting this study included:

1. Permission to conduct this study was secured from the Institute director.
2. The related literature pertinent to this study was reviewed, summarized, and organized for presentation.
3. The coded data which preserved the anonymity of each enrollee was secured from the Institute director. For each instrument the writer ranked the scores from high (1) to low (30).
4. The coded rankings of counselor effectiveness which the writer received were the result of rankings which had been averaged.

¹Buros, The Sixth Mental Measurements Yearbook, pp. 143-144.

The average ranks had been ranked so that each enrollee had a single ranking which was a composite evaluation of judgment of the seven counselor educators.

5. The writer computed the Spearman Rank-Difference coefficients of correlation between rankings of effectiveness and rankings of scores obtained on each of the psychometric instruments previously listed. The writer computed the standard error of the coefficient of correlation and tested the null hypotheses at the .05 level of confidence with 28 degrees of freedom.
6. The writer made frequency distribution tables and found the range and mean for each test and for each of the sub-tests.
7. The conclusions are presented in terms of either rejection or acceptance of the null hypotheses stated previously. Implications and recommendations stem directly from the findings and conclusions of the study.

Survey of the literature.--Counselor educators seem to agree that present selection procedures for counselor education programs are inadequate. A survey of the literature reveals an impressive number of researches in the general area of selection as a facet of counselor education. Cash and Munger point out that the NDEA Counseling and Guidance Institutes continue as a vital influence on the education of counselors and account for the large number of full-time counseling students available as subjects for research.¹ The criterion for

¹William L. Cash, Jr. and Paul F. Munger, "Counselors and Their Preparation," Review of Educational Research, XXXVI (April, 1966), p. 256.

inclusion of literature reviewed in this paper is that it shed some light on the relationship between cognitive performance of counselors on psychometric instruments and their affective performance as counselors.

A Statement of Policy by the American Personnel and Guidance Association concerning Selection of Counselor Candidates is as follows:

"Selection of counselor candidates is the responsibility of the educational institution, and counselor educators have a responsibility to use efficient procedures of selective admission and selective retention.

"Admission and continuance in a counselor preparation program should be based on evidence that the counselor candidate is a person who is likely to achieve the quality of performance necessary for excellence in counseling. Criteria should include personal qualifications for counseling as well as the ability necessary to master academic requirements and acquire professional skills. Prerequisites and other criteria for entry into the counselor preparation program should have a sound, logical basis and be supported by empirical evidence whenever possible. They should be systematically evaluated and revised whenever there is evidence that change is desirable."¹

In advocating a sociological framework for structuring guidance education programs, Nancy Schlossberg says that selection criteria of students might better be based on a sociological as well as psychological framework. An individual's success in a particular school is seen by Schlossberg to depend not only on his values, abilities, and personality, but also on the total social environment provided, with which he interacts. She would add a dimension to selection criteria: prediction in terms of the personality characteristics of the candidates in relation to particular settings in which they might train. She sees a current

¹American Personnel and Guidance Association, A Statement of Policy, "The Counselor: Professional Preparation and Role," The Personnel and Guidance Journal, XXXXI (January, 1963), pp. 480-85.

need for guidance educators to integrate material not only from sociology and psychology, but also from anthropology, economics, and philosophy, so that a more comprehensive framework can be employed in future evaluations.¹

Identification of personality characteristics associated with effective counselors has not resulted in any striking results. Tyler suggests that assessment instruments are more successful when utilized as negative predictors, i.e., indicators of probable failure. Positive characteristics may be extremely difficult to specify.²

Sattler suggests that the minimum qualifications for counselor competence which have been established tentatively include intellectual ability, emotional stability, nonrigidity, and a minimum degree of hostility.

Time perspective is a basic attitude of an individual which reflects a general orientation to life. Students who are either academically unsuccessful, pessimistic, or who have limited need achievement have been found to possess a limited future time perspective.

Sattler hypothesized that more competent counselors or those having an interest pattern resembling that of a high school counselor, would have a longer future time perspective. His subjects were twenty-

¹Nancy K. Schlossberg, "A Sociological Framework for Evaluating Guidance Education," The Personnel and Guidance Journal, XLII (November, 1963), pp. 285-89.

²Leona E. Tyler, The Work of the Counselor (New York: Appleton-Century-Croft, 1961), pp. 245-49.

eight enrollees of the NDEA 1961-1962 Guidance Institute at the University of North Dakota. Two counselor competence variables, one interest variable, and three time perspective variables were used. All measures were obtained during the last week of the Institute. The two counselor competence measures included: a ranking of the subjects on the basis of potential success as a school counselor by the six members of the Institute staff, and a ranking made from ratings of each student's ability to establish a warm and understanding relationship with adolescents. The interest measure was the score obtained from the Kuder Preference Record Occupational Form D for the High School Counselor scale which was then rank ordered for the total group. The time perspective variables included the administration of two future time and one past time measure.

The results suggest that students in a guidance institute possessing a longer future time perspective are more likely to have similar interests to high school counselors than students with shorter future time perspectives. The generalizability of this finding to those planning to do graduate work in guidance and counseling is difficult to make since the data was collected after a nine month intensive training program. The significant relationship between the staff ratings of counselor overall ability and counselor skill per se suggests that the raters were utilizing a similar frame of reference for both criteria.¹

¹Jerome M. Sattler, "Counselor Competence, Interest, and Time Perspective," Journal of Counseling Psychology, XI (Winter, 1964), pp. 357-60.

Demos and Zuwaylif did a study concerning predicting counselor success on the basis of selected personality characteristics and hypothesized that there were no significant differences between counselors who were judged by their supervisors as being most successful and those judged as being least successful, on any of the three following psychometric measurements: (1) Allport-Vernon-Lindsey Study of Values; (2) Kuder Preference Record (Personal); and (3) Edwards Personal Preference Schedule.

Subjects were a relatively homogeneous group of thirty secondary school counselors participating in the NDEA Counseling and Guidance Institute at San Fernando Valley State College during the summer of 1962. The dominant phase of the institute was extensively supervised counseling accomplished with voluntary secondary school students recruited for vocational-educational counseling. The institute staff, comprised of four full-time members, three of whom were directly involved in supervisory practicum experiences, rated the counselors using multiple objective and subjective criteria as to their effectiveness and categorized the fifteen most successful counselors and the fifteen least successful counselors from the group of thirty. The three psychometric measurements were administered to the entire group.

Using statistical tests (t tests), The Study of Values and Kuder Preference Record - Personal were found not to discriminate between the most effective and the least effective counselors. No significant differences were found. The Edwards Personal Preference Schedule, on the other hand, differentiated the above average counselors from the below average counselors on several scales, namely the need for autonomy,

affiliation, abasement, nurturance, and aggression. The most effective counselors indicated significantly more nurturance and affiliation, and the least effective counselors exhibited more autonomy, abasement, and aggression.

The writers conclude that in view of the inconclusiveness of most studies made of personality characteristics of counselors, the counselor educator should use caution with regard to screening or evaluating counselors or potential counselors on the basis of personality characteristics measured by present psychological instruments.¹

Many recent authors in the field of counseling and psychotherapy have stressed the importance of the counseling relationship that develops between the counselor and the client. A study by Richard Cahoon reports an investigation of three counselor variables hypothesized as being related to therapeutic relationship qualities.

The sample consisted of twenty-five graduate students enrolled in a Counseling Psychology Practicum and fifty undergraduate students. Each counselor worked with two undergraduate clients.

From each of the counselors, measures of his open or closed mindedness, his experiencing level, and his stated attitudes and orientations toward counseling were obtained. The measures used for this were the Dogmatism Scale, the Experiencing Scale, and the Therapists Orientation Questionnaire, respectively. The Experiencing Scale was used to rate from recorded samples for an experiencing interview. Each client rated

¹George De. Demos and Fadil H. Zuwaylif, "Characteristics of Effective Counselors," Counselor Education and Supervision, V (Spring, 1966), pp. 163-165.

his counselor in terms of four relationship variables on the basis of the Relationship Inventory. These variables were Empathic Understanding, Level of Regard, Congruence, and Unconditionality of Regard. The data were obtained during the fifth week of interviews. They were analyzed by means of a multiple regression program on an I.B.M. 709 Computer.

The results indicated that, in general, the counselor's experiencing level and his degree of open-mindedness are significantly related, at the .05 level, to the counseling relationship, as measured in this study; the higher the rated experiencing level and the lower the dogmatism score, the better the relationship. The counselor's stated attitudes and orientations are not, in general, significantly related to this relationship.¹

Carl Rogers hypothesizes that constructive personality growth and change comes about only when the client perceives and experiences a certain psychological climate in the relationship. The conditions which constitute this climate, according to Rogers, do not consist of knowledge, intellectual training, orientation in some schools of thought, or techniques. They are feelings or attitudes which must be experienced by the counselor and perceived by the client if they are to be effective. Those he singles out as being essential are: a realness, genuineness, or congruence in the therapist; a sensitive, empathic understanding of the client's feelings and personal meanings; a warm, acceptant prizing of the client; and an unconditionality in this positive regard.

¹Richard Olson Cahoon, "Some Counselor Attitudes and Characteristics Related to the Counseling Relationship" (unpublished Doctoral dissertation, School of Education, The Ohio State University, 1962).

At least a dozen studies have been done throwing light on Rogers' hypotheses. Three methods have been used to measure the attitudinal elements he described: ratings of four minute segments of interviews, taken in a randomized way from tape-recorded interviews; the Relationship Inventory filled out by clients at different points in time; the Relationship Inventory with identical items filled out by the therapist or counselor. In the various studies, different criteria are used for assessing the degree of constructive personality change which has taken place over the course of the interviews.

Some of the general findings from the studies include:

1. The counselor is the most significant factor in setting the level of conditions in the relationship, though the client, too, has some influence on the reality of the relationship.
2. Clients who will later show more change perceive more of these attitudinal conditions early in the relationship with their counselor or therapist.
3. Counselors or therapists tend to be quite consistent in the level of the attitudinal conditions which they offer to each client.
4. The major finding from all these studies is that those clients in relationships marked by a high level of counselor congruence, empathy, and unconditional positive regard, show constructive personality change and development. Clients in relationships characterized by a low level of these attitudinal conditions show significantly less positive change on these same indices.

These studies would, if confirmed by further work, have significant implications for the training of counselors and therapists. To the extent that the counselor is seen as being involved in interpersonal relationships, and to the extent that the goal of those relationships is to promote healthy development, then certain conclusions would seem to follow according to Rogers. It would mean that we would endeavor to select individuals for such training who already possess, in their ordinary relationships with other people, a high degree of the qualities described. We would want people who were warm, spontaneous, real, understanding, and non-judgmental. We would also endeavor so to plan the educational program for these individuals that they would come increasingly to experience empathy and liking for others, and that they would find it increasingly easier to be themselves, to be real. By feeling understood and accepted in their training experiences, by being in contact with genuineness and absence of facade in their instructors, they would grow into more and more competent counselors. There would be as much focus in such training on the interpersonal experience as on the intellectual learning. It would be recognized that no amount of knowledge of tests and measures, or of counseling theories, or of diagnostic procedures could make the trainee more effective in his personal encounter with his clients. There would be a heavy stress upon the actual experience of working with clients, and the thoughtful and self-critical assessment of the relationships formed.¹

¹Carl R. Rogers, "The Interpersonal Relationship: The Core of Guidance," Harvard Educational Review, XXXII (Fall, 1962), pp. 416-29.

Working from a Rogerian viewpoint, J. A. Steph attempted to develop instrumentation to predict the relationship orientation of applicants for the 1962-1963 NDEA Institute at the University of Wisconsin. His work is reported by Robert M. Wasson who used Steph's scale in his study. Steph constructed the Wisconsin Relationship Orientation Scale (WROS). The WROS is a five point rating scale that purports to measure the degree of psychological closeness the judge would allow the subject being rated. Three independent judges used the WROS to evaluate responses made by members of the NDEA institute to eight hypothetical counseling situations taped prior to their selection to the institute.

Steph was able to demonstrate both the reliability and the predictive validity of his scale. As criteria, Steph employed three variables; ratings of randomly drawn counseling segments from taped interviews conducted during practicum experience, staff ratings, and peer ratings.

Wasson was interested in the possible relationship of the WROS ratings of subjects' pre-selection responses to intelligence, interest, and personality measures. Wasson used the same institute subjects who each completed during the first month of the institute the following instruments: the Minnesota Multiphasic Personality Inventory; Edwards Personal Preference Schedule; Miller Analogies Test; Ohio State Psychological Examination; NDEA Comprehensive Examination in Guidance and Counseling; and the Strong Vocational Inventory Blank for Men.

Both analyses conducted reveal that the relationship construct tapped by the WROS is essentially uncorrelated with the intellectual, personality, and interest measurements employed in this study. It

would appear further that such instruments were not capable of discriminating between a group of individuals who were given high ratings on the WROS from those who received low ratings prior to their participation in a counselor education program. It is claimed that the construct of relationship orientation as measured by the WROS is tenable and is significantly related to post-preparation criteria.

The implications of such findings as presented by Steph and Wasson should not be overlooked. The significant relationship of the pre-selection measure to post-preparation criteria at levels superior to those found in most predictive studies, together with the absence of such relationships using the more common selection instruments, should provide support for the experimental use of the WROS in the selection of candidates for counselor education programs.¹

¹Robert M. Wasson, "The Wisconsin Relationship Orientation Scale as a Unique Variable in the Assessment of Applicants for Counselor Education," Counselor Education and Supervision, IV (Winter, 1956), pp. 89-92.

CHAPTER II

PRESENTATION AND ANALYSIS OF DATA

Organization and treatment of data.--The writer received coded average rankings of counselor effectiveness for the thirty subjects as judged by members of the Institute faculty and the coded scores from the eight psychometric instruments administered to the subjects. The scores from the psychometric instruments were ranked from high (1) to low (30), and the range and mean for each of the forty-five tests and subtests were found. Frequency distribution tables were made for all forty-five tests. The Spearman Rank-Difference coefficient of correlation was computed between rankings of effectiveness and rankings of scores. The standard error of the coefficient of correlation was computed, and the null hypotheses were tested at the .05 level of confidence with twenty-eight degrees of freedom.

The variability of scores obtained on the psychometric instruments.
--The frequency distributions shown in Tables 1-8 were made in order to test the first hypothesis: Little or no variability exists in the test scores attained by the thirty enrollees. Range and mean are shown for each set of scores. Table 1 shows the distribution of scores for the Graduate Record Examination's three parts: Verbal, Quantitative, and Advanced Tests.

TABLE 1
DISTRIBUTION OF SCORES ON THE
GRADUATE RECORD EXAMINATION

Scores	Verbal Test Frequency	Quantitative Test Frequency	Advanced Test Frequency
650-699	1	0	1
600-649	3	1	0
550-599	0	0	4
500-549	3	2	4
450-499	3	4	5
400-449	7	3	8
350-399	3	5	6
300-349	5	8	1
250-299	5	3	1
200-249	0	4	0
Number	30	30	30
Range	690-260	640-240	660-260
Mean	419	368	455

Table 1 shows a range of 431 points on the Verbal test and 401 points on both the Quantitative and Advanced tests. On the Verbal test these scores range from below the 1st percentile to the 95th percentile; on the Quantitative test scores range from below the 1st to the 91st percentile; and on the Advanced test the range is from the 4th to the 98th percentile. Since these ranges of performance indicate considerable

variability, the writer rejects the null hypothesis for all three parts of the Graduate Record Examination.

In Table 2 a frequency distribution is given for the scores attained on the Miller Analogies Test.

TABLE 2
DISTRIBUTION OF SCORES ON THE
MILLER ANALOGIES TEST

Scores	Frequency
65-69	1
60-64	1
55-59	1
50-54	6
45-49	1
40-44	3
35-39	2
30-34	2
25-29	4
20-24	3
15-19	4
10-14	<u>2</u>
Number	30
Range	66-11
Mean	36

Table 2 shows marked variability with a range of 55 points and a mean of 36.

Ten subjects, one-third of the group, scored above the 75th percentile, while nine subjects scored below the 25th percentile according to norms based on first year graduate students enrolled in Master's degree programs in education. The writer rejects the null hypothesis for the Miller Analogies Test.

Table 3 is a frequency distribution table for the Otis Quick-Scoring Mental Ability Test.

TABLE 3

DISTRIBUTION OF SCORES ON THE OTIS QUICK-SCORING
MENTAL ABILITY TEST

Scores	Frequency
70-74	2
65-69	3
60-64	5
55-59	4
50-54	5
45-49	3
40-44	1
35-39	5
30-34	<u>2</u>
Number	30
Range	74-30
Mean	52

The range of 45 points (74-30) on the Otis indicates a probable wide range of mental abilities on the parts of the subjects. The scores of the subjects are evenly distributed over the entire range with no clustering of scores appearing in the distribution.

The null hypothesis is rejected for the Otis Quick Scoring Mental Ability Test.

A frequency distribution table is provided for the Ohio State University Psychological Test in Table 4.

TABLE 4
DISTRIBUTION OF SCORES ON THE OHIO STATE
UNIVERSITY PSYCHOLOGICAL TEST

Scores	Frequency
130-139	2
120-129	2
110-119	4
100-109	3
90- 99	4
80- 89	2
70- 79	2
60- 69	4
50-59	3
40-49	3
30-39	<u>1</u>
Number	30
Range	135-36
Mean	86

A range of 135-36 and a mean of 86 in Table 4 with not more than four subjects appearing in any one step indicates considerable variability. The null hypothesis is rejected for the Ohio State University Psychological Test.

Table 5 shows the distribution of scores for the Minnesota Teacher Attitude Inventory, designed to assess pupil-teacher relations.

TABLE 5
DISTRIBUTION OF SCORES ON THE MINNESOTA
TEACHER ATTITUDE INVENTORY

Scores	Frequency
100-109	1
90-99	0
80-89	2
70-79	3
60-69	3
50-59	5
40-49	5
30-39	1
20-29	2
10-19	1
0-9	1
-10- -1	4
-20- -11	1
-30- -21	<u>1</u>
Total	30

TABLE 5--Continued

Range	108- -29
Mean	41

Great variability is observed in Table 5 with a range of 137 points placing subjects from below the 1st percentile to the 98th percentile according to norms based upon graduate students in education. The null hypothesis is rejected for the Minnesota Teacher Attitude Inventory.

In Table 6 a frequency distribution is given for the fifteen variables of the Edwards Personal Preference Schedule. They are: Achievement (ach), Deference (def), Order (ord), Exhibition (exh), Autonomy (aut), Affiliation (aff), Intracception (int), Succorance (suc), Dominance (dom), Abasement (aba), Nurturance (nur), Change (chg), Endurance (end), Heterosexuality (het), and Aggression (agg).

Table 6 shows that in all the EPPS variables there is a wide dispersion of subjects over a wide range of scores with no large clustering of individuals at any one score. Even in the def variable where the least range of score occurs, the highest score is more than twice the numerical value of the lowest score. The writer rejects the null hypothesis for all the variables of Edwards Personal Preference Schedule.

Table 7 shows the distribution of scores on each of the following ten traits of the Guilford-Zimmerman Temperament Survey: General Activity (G), Restraint (R), Ascendance (A), Sociability (S), Emotional

TABLE 6

DISTRIBUTION OF SCORES ON THE EDWARDS PERSONAL PREFERENCE SCHEDULE

Scores	Achievement	Deference	Order	Exhibition	Autonomy	Affiliation	Intracception
26-27	0	0	0	0	0	0	4
24-25	0	0	0	0	0	0	5
22-23	1	0	0	0	1	1	1
20-21	5	1	4	0	2	2	5
18-19	4	2	7	4	3	4	4
16-17	5	6	4	2	1	4	5
14-15	4	7	0	7	5	6	1
12-13	5	5	4	7	5	5	3
10-11	3	7	2	4	3	6	1
8-9	3	2	3	2	2	0	0
6-7	0	0	1	2	3	2	0
4-5	0	0	3	1	4	0	0
2-3	0	0	2	1	1	0	1
0-1	0	0	0	0	0	0	0
Number	30	30	30	30	30	30	30
Range	22-8	20-8	21-3	18-3	23-3	22-7	27-3
Mean	15	14	13	13	12	14	19

TABLE 6--Continued

Scores	Succor- ance	Domi- nance	Abase- ment	Nurtur- ance	Change	Endur- ance	Hetero- sexuality	Aggres- sion
26-27	1	2	0	0	0	3	0	0
24-25	0	0	0	1	2	2	1	0
22-23	0	1	2	2	4	3	3	0
20-21	1	2	2	3	3	3	3	0
18-19	1	4	2	4	4	2	1	3
16-17	0	2	2	7	4	3	4	3
14-15	3	3	5	5	4	2	2	4
12-13	8	5	1	2	4	3	2	3
10-11	5	5	6	1	4	2	4	5
8-9	2	2	6	1	1	2	2	5
6-7	5	4	3	3	0	3	7	4
4-5	2	0	1	1	0	2	0	2
2-3	2	0	0	0	0	0	1	0
0-1	0	0	0	0	0	0	0	1
Number	30	30	30	30	30	30	30	30
Range	26-2	26-6	23-4	24-5	25-8	27-5	24-3	19-1
Mean	11	14	13	16	17	16	13	11

TABLE 7

DISTRIBUTION OF SCORES ON THE GUILFORD-ZIMMERMAN TEMPERAMENT SURVEY

Scores	General Activity	Restraint	Ascendancy	Sociability	Emotional Stability
30-32	0	0	0	0	1
27-29	2	1	1	8	4
24-26	3	7	4	6	10
21-23	3	9	4	8	7
18-20	12	4	6	1	3
15-17	3	5	7	3	3
12-14	6	3	2	1	0
9-11	1	1	3	1	0
6-8	0	0	3	1	0
3-5	0	0	2	1	2
Number	30	30	30	30	30
Range	28-9	27-9	27-3	29-4	30-3
Mean	19	20	17	22	22

TABLE 7--Continued

Scores	Objectivity	Friendliness	Thoughtfulness	Personal Relations	Masculinity
30-32	0	0	0	0	0
27-29	4	0	2	3	0
24-26	9	11	3	10	5
21-23	7	4	14	5	3
18-20	7	2	6	5	6
15-17	1	8	3	4	2
12-14	0	5	1	0	2
9-11	1	0	0	3	8
6-8	0	0	1	0	2
3-5	1	0	0	0	2
Number	30	30	30	30	30
Range	28-4	26-13	28-7	28-10	25-3
Mean	22	20	21	21	15

Stability (E), Objectivity (O), Friendliness (F), Thoughtfulness (T), Personal Relations (P), and Masculinity (M).

The Guilford-Zimmerman traits show a wide dispersion of individual scores with the exception of the Friendliness and Thoughtfulness traits where pronounced clustering is evident. Even here, however, the range is sufficiently large to denote variability. Even in the instance of the trait with the least range of scores (Friendliness), the highest score exceeds the lowest by a multiple of two, and the clustering of scores is heaviest and approximately equal at both ends of the range. Therefore, the writer rejects the null hypothesis for all traits of the Guilford-Zimmerman Temperament Survey.

In Table 8 a frequency distribution is given for each of the following thirteen scales of the Minnesota Multiphasic Personality Inventory: the Lie Scale (L), the Paranoia Scale (Pa), the Validity Score (F), the K Score (K), the Hypochondriasis Scale (Hs), the Hysteria Scale (Hy), the Psychasthenia Scale (Pt), the Interest Scale (Mf), the Depression Scale (D), the Psychopathic Deviate Scale (Pd), the Schizophrenia Scale (Sc), the Hypomania Scale (Ma), and the Social I. E. Scale (Si).

Scores on the F, L, and Pa scales of the MMPI show a tendency to cluster, there being little dispersion of the scores of the thirty subjects. For example, in the F scale, with a total range of 22 points, 28 of the 30 subjects score within an interval of 6 points. Therefore, the null hypothesis is accepted for these three scales. For all other scales, however, the hypothesis is rejected as there is a dispersion of scores with no more than normal clustering.

TABLE 8

DISTRIBUTION OF SCORES ON THE MINNESOTA MULTIPHASIC PERSONALITY INVENTORY

Scores	Paranoia Scale	Validity Score	K Score	Hypochondri- asis Scale + .5K	Psychasthenia Scale + 1K	Interest Scale	Hysteria Scale
57-59	0	0	0	0	0	0	0
54-56	0	0	0	0	0	0	0
51-53	0	0	0	0	0	0	0
48-50	0	0	0	0	1	0	0
45-47	0	0	0	0	0	1	0
42-44	0	0	0	0	0	2	0
39-41	0	0	0	0	1	3	0
36-38	0	0	0	0	0	5	1
33-35	0	0	0	0	0	4	0
30-32	0	0	0	0	4	2	0
27-29	0	0	0	0	8	5	4
24-26	1	0	6	1	6	4	5
21-23	0	1	6	2	7	3	13
18-20	0	0	3	0	3	0	3
15-17	0	0	6	9	0	1	4
12-14	5	0	4	8	0	0	0
9-11	14	1	5	8	0	0	0
6-8	10	0	0	2	0	0	0
3-5	0	14	0	0	0	0	0
0-2	0	14	0	0	0	0	0
Number	30	30	30	30	30	30	30
Range	25-6	21-0	26-9	26-8	50-18	45-17	38-15
Mean	10	3	18	14	27	32	23

TABLE 8--Continued

Scores	Depression Scale	Psychopathic Deviate Scale+.4K	Schizophrenia Scale + 1K	Hypomania Scale+.2K	Social I.E. Scale	Lie Score
57-59	0	0	1	0	0	0
54-56	0	0	0	0	0	0
51-53	0	0	0	0	0	0
48-50	0	0	0	0	1	0
45-47	0	0	0	0	0	0
42-44	0	0	0	0	1	0
39-41	1	0	0	0	0	0
36-38	0	1	0	0	2	0
33-35	0	0	0	0	1	0
30-32	1	1	3	1	0	0
27-29	0	2	9	0	0	0
24-26	3	8	10	8	4	0
21-23	8	10	3	7	7	0
18-20	7	4	3	5	3	0
15-17	6	3	1	7	6	0
12-14	3	1	0	0	4	0
9-11	1	0	0	2	1	3
6-8	0	0	0	0	0	8
3-5	0	0	0	0	0	11
0-2	0	0	0	0	0	8
Number	30	30	30	30	30	30
Range	40-10	38-13	59-15	31-10	49-10	11-0
Mean	20	23	26	20	22	5

Counselor effectiveness as judged by the counselor education faculty.--Each of the seven members of the Institute faculty were asked to rank the thirty subjects according to counselor effectiveness using as a general guide the definition of effectiveness given in the paper previously. These ranks were then averaged and ranked. Table 9 which follows tests the second null hypothesis: No differentiation exists in the average rankings of counselor effectiveness of the thirty counselor enrollees.

TABLE 9
COUNSELOR EFFECTIVENESS AS JUDGED BY
THE COUNSELOR EDUCATION FACULTY

Code No.	Average Rank	Rank of Average Ranks
01	2.28	1
02	5.14	2
03	5.42	3
04	5.57	4
05	8.14	5.5
06	8.14	5.5
07	8.57	7
08	10.57	8
09	13.57	9
10	13.71	10
11	14.00	11
12	14.42	13
13	14.42	13

TABLE 9--Continued

Code No.	Average Rank	Rank of Average Ranks
14	14.42	13
15	15.28	15
16	16.28	16
17	16.42	17
18	16.71	18.5
19	16.71	18.5
20	18.14	20
21	19.71	21
22	20.42	22
23	20.57	23.5
24	20.57	23.5
25	20.71	25
26	20.71	26
27	22.00	27
28	22.28	28
29	26.71	29
30	28.14	30

Table 9 makes evident that differences do exist in the average rankings of the thirty subjects with twenty-four individuals receiving unique rankings and no more than two of the remaining six receiving any one ranking. Therefore, the writer rejects the second null hypothesis.

The relationship between counselor effectiveness as judged by the faculty members and psychometric test performance.--The third null hypothesis is: No statistically reliable relationship exists between the scores counselor enrollees attained on each of the psychometric instruments and their rankings of counselor effectiveness as judged by counselor educators. In order to test this, the writer computed the rank-difference coefficient of correlation, rho (ρ), for each set of test and sub-test scores and the faculty rankings of effectiveness using Spearman's rank-difference correlation method, the formula for which is:

$$\rho = 1 - \frac{6 \sum D^2}{N (N^2 - 1)}$$

In the above formula, D = the difference between each individual's rankings for the two variables and N = the number of subjects. To adjudge the reliability of rho, the standard error of rho (ρ) was computed, and rho was tested by the Wallace-Snedecor Table of Coefficients of Correlation Significant at the 5 Per Cent Level for 28 degrees of freedom.¹ The values in this table were adjusted by a factor of 1.04, as the writer was testing the Spearman rho rather than the Pearson r for which the tables were specifically designed.² A resulting value of .38 was obtained for the .05 level of confidence. Table 10 lists for each test and sub-test the coefficient of correlation, rho and the P value (significance). The standard error of rho is also listed.

¹J. P. Guilford, Fundamental Statistics in Psychology and Education (New York: McGraw-Hill, 1950), pp. 609-610.

²Ibid., p. 313.

TABLE 10

COEFFICIENTS OF CORRELATION BETWEEN SCORES ATTAINED ON CERTAIN
PSYCHOMETRIC INSTRUMENTS AND RANKINGS OF COUNSELOR EFFECTIVENESS

Tests	ρ	P Value	σ_p
Graduate Record Examinations			
Verbal	.71	>.01	.10
Quantitative	.70	>.01	.10
Advanced	.67	>.01	.11
Miller Analogies Test	.64	>.01	.11
Otis Quick-Scoring Mental Ability Test	.74	>.01	.09
Ohio State University Psychological Test	.72	>.01	.09
Minnesota Teacher Attitude Inventory	.55	>.01	.13
Edwards Personal Preference Schedule			
Achievement	-.20	<.05	.19
Deference	-.34	<.05	.17
Order	-.13	<.05	.19
Exhibition	.08	<.05	.19
Autonomy	.31	<.05	.17
Affiliation	.09	<.05	.19
Intraception	.04	<.05	.19
Succorance	.08	<.05	.19
Dominance	.38	.05	.17
Abasement	-.44	>.05	.16
Nurturance	.06	<.05	.19
Change	.32	<.05	.17

TABLE 10--Continued

Tests	ρ	P Value	σ_p
Endurance	-.39	>.05	.16
Heterosexuality	.42	>.05	.16
Aggression	.19	<.05	.16
Guilford-Zimmerman Temperament Survey			
General Activity	.15	<.05	.19
Restraint	-.24	<.05	.18
Ascendance	.18	<.05	.19
Sociability	.42	>.05	.16
Emotional Stability	.24	<.05	.18
Objectivity	-.11	<.05	.19
Friendliness	-.10	<.05	.19
Thoughtfulness	-.04	<.05	.19
Personal Relations	.17	<.05	.19
Masculinity	.03	<.05	.19
Minnesota Multiphasic Personality Inventory			
Lie Scale	.02	<.05	.19
Paranoia Scale	.17	<.05	.19
Validity Score	-.11	<.05	.18
Hypochondriasis Scale + .5K	-.25	<.05	.18
K Score	.26	<.05	.18
Depression Scale	-.33	<.05	.17
Hysteria Scale	-.02	<.05	.19

TABLE 10--Continued

Test	ρ	P Value	σ_{ρ}
Psychopathic Deviate Scale +.4K	.06	<.05	.19
Interest Scale	.04	<.05	.19
Psychasthenia Scale + 1K	-.07	<.05	.19
Schizophrenia Scale + 1K	.02	<.05	.19
Hypomania Scale +.2K	.06	<.05	.19
Social I.E. Scale	-.28	<.05	.18

Criterion for significance at .05 level of confidence = .38

Criterion for significance at .01 level of confidence = .48

ρ = coefficient of correlation (ρ = rho)

σ_{ρ} = standard error of rho

P Value = significance

Table 10 indicates that the following tests and sub-tests are significant at the .05 level of confidence: the Verbal, Quantitative, and Advanced Tests of the Graduate Record Examination; Miller Analogies Test; Otis Quick-Scoring Test of Mental Ability; Ohio State University Psychological Test; Minnesota Teacher Attitude Inventory; the Sociability trait of the Guilford-Zimmerman Temperament Survey; and the Dominance, Abasement, Endurance, and Heterosexuality variables of the Edwards Personal Preference Schedule. Rho for all these tests meets or exceeds the .38 criterion established earlier, although the EPPS Dominance and Endurance variables are borderline cases with values of .38 and -.39

respectively. The negative correlations for the EPPS Endurance and Abasement variables indicate inverse relationships between high scores and effectiveness. For these twelve tests the writer rejects the third null hypothesis.

The writer was further able to establish that rho for seven of the above tests was sufficiently high to meet the criterion for correlation at the .01 level - $\rho = .48$ or greater. The tests are the Verbal, Quantitative, and Advanced Tests of the Graduate Record Examination; Miller Analogies Test; Otis Quick-Scoring Test of Mental Ability; Ohio State University Psychological Test; and the Minnesota Teacher Attitude Inventory.

Most of the thirty-three other tests and sub-tests do not even approach significant statistical correlation, two-thirds of them having rho's of less than .20. The writer accepts the third null hypothesis for all thirty-three tests not listed in Table 10 as being significant at or beyond the .05 level.

Of the seven tests significant at the .01 level, the highest rho is for a psychological test covering only verbal content (Ohio State); the five next highest rho's are for tests measuring various mental abilities (Otis, GRE, MAT); and the last of the group is an attitude inventory (MTAI). In the personality inventories, the traits showing significant statistical correlation with effectiveness are: Dominance (EPPS), Heterosexuality (EPPS), Sociability (G-ZTS); Abasement (EPPS), and Endurance (EPPS) show significant inverse correlations. Of thirty-eight sub-tests of the three personality inventories, only five correlations show significance at the .05 level of confidence.

CHAPTER III

SUMMARY AND CONCLUSIONS

Problem and methodology.--The problem in this study was to determine the relationship between the rankings of counselor effectiveness of thirty counseling education students and the scores they attained on certain psychometric instruments. The null hypotheses that were tested are as follows:

1. Little or no variability exists in the test scores attained by the thirty enrollees.
2. No differentiation exists in the average rankings of counselor effectiveness of the thirty counselor enrollees.
3. No statistically reliable relationship exists between the scores counselor enrollees attained on each of the psychometric instruments and their rankings of counselor effectiveness as judged by counselor educators.

The normative-survey method of research was used, employing specific techniques of statistical analyses. Permission to conduct this study was secured from the Institute director, pertinent related literature was surveyed, the thesis outline was presented and accepted, and coded test data and rankings of effectiveness were secured from the Institute director. Frequency distribution tables were made for the forty-five tests and sub-tests, and the means were computed. The

enrollees' scores were placed in rank order so that correlations could be determined by the Spearman Rank-Difference formula; the standard error of the coefficient of correlation was computed, and the null hypotheses were tested at the .05 level of confidence.

Summary of related literature.--A Statement of Policy by the American Personnel and Guidance Association concerning Selection of Counselor Candidates is as follows:

"Selection of counselor candidates is the responsibility of the educational institution, and counselor educators have a responsibility to use efficient procedures of selective admission and selective retention. ... Criteria should include personal qualifications for counseling as well as the ability necessary to master academic requirements and acquire professional skills. .."¹

Schlossberg says that selection criteria of students might better be based on a sociological as well as psychological framework. An individual's success in a particular school is seen by Schlossberg to depend not only on his values, abilities, and personality, but also on the total social environment provided, with which he interacts.²

Tyler suggests that assessment instruments of personality characteristics are more successful when utilized as negative predictors, i.e., indicators of probable failure. Positive characteristics may be extremely difficult to specify.³

Sattler suggests that the minimum qualifications for counselor competence which have been established tentatively include intellectual

¹American Personnel and Guidance Association, A Statement of Policy, loc. cit.

²Schlossberg, loc. cit.

³Tyler, loc. cit.

ability, emotional stability, nonrigidity, and a minimum degree of hostility. He would list future time perspective as an additional qualification.¹

In a study concerning predicting counselor success on the basis of selected personality characteristics, Demos and Zuwaylif found that there were no significant differences between counselors who were judged as being most successful and those judged as being least successful, on the Allport-Vernon-Lindsey Study of Values or the Kuder Preference Record (Personal), but on Edwards Personal Preference Schedule, they found that the most effective counselors indicated significantly more nurturance and affiliation, and the least effective counselors exhibited more autonomy, abasement, and aggression.²

Many recent authors in the field of counseling and psychotherapy have stressed the importance of the counseling relationship that develops between the counselor and the client. Cahoon found the counselor's experiencing level and his degree of open-mindedness significantly related, at the .05 level, to the therapeutic counseling relationship.³

Carl Rogers hypothesizes that constructive personality growth and change comes about only when the client perceives and experiences a certain psychological climate in the relationship. At least a dozen studies have been done throwing light on Rogers' hypotheses, the major

¹Sattler, loc. cit.

²Demos and Zuwaylif, loc. cit.

³Cahoon, loc. cit.

finding being that those clients in relationships marked by a high level of counselor congruence, empathy, and unconditional positive regard, show constructive personality change and development.¹

Wasson found that the relationship construct tapped by the Wisconsin Relationship Orientation Scale is essentially uncorrelated with the intellectual, personality, and interest measurements obtained from the following: Minnesota Multiphasic Personality Inventory, Edwards Personal Preference Schedule, Miller Analogies Test, Ohio State Psychological Examination, NDEA Comprehensive Examination in Guidance and Counseling, and the Strong Vocational Inventory Blank for Men.²

Summary of findings.---The following statements are derived from the findings extracted from analysis of the data:

1. Variability exists in the test scores of the thirty subjects on all psychometric instruments with the exception of the F, L, and Pa scales of the Minnesota Multiphasic Personality Inventory.
2. Differences exist in the average rankings of counselor effectiveness for the thirty subjects; twenty-four individuals received unique rankings, and no more than two of the remaining six received any one ranking.
3. Coefficients of correlation, significant at or beyond the .05 level of confidence, were found between rankings of

¹Rogers, loc. cit.

²Wasson, loc. cit.

effectiveness and the following twelve tests and sub-tests:

Otis Quick-Scoring Mental Ability Test; Ohio State University Psychological Test; Graduate Record Examinations - Verbal, Quantitative, and Advanced Tests; Miller Analogies Test; Minnesota Teacher Attitude Inventory; Guilford-Zimmerman Temperament Survey - Sociability; and Edwards Personal Preference Schedule - Dominance, Heterosexuality, and inversely, Abasement, and Endurance. Correlations not significantly different from zero were found for all other tests.

Conclusions.--On the basis of the findings derived from the statistical analysis of the data, the following conclusions were drawn:

1. The null hypothesis concerning variability in the test scores of the thirty subjects was rejected.
2. The null hypothesis concerning differentiation in the average rankings of counselor effectiveness of the thirty subjects was rejected.
3. The null hypothesis concerning the relationship between test performance and counselor effectiveness was rejected, at or beyond the .05 level, for the following tests: Otis, Ohio Psychological; GRE - Verbal, Quantitative, and Advanced; Miller Analogies; Minnesota Teacher Attitude Inventory; Guilford-Zimmerman Temperament Survey - Sociability; and Edwards Personal Preference Schedule - Dominance, Heterosexuality, and, inversely, Abasement, and Endurance. The null hypothesis was accepted for all other tests.

Implications.--The analysis and interpretation of the data of this study warrant the following implications:

1. Since variability exists in the test scores of the thirty subjects on all psychometric instruments with the exception of the F, L, and Pa scales of the Minnesota Multiphasic Personality Inventory, it can be implied that a wide range of mental functioning, verbal and quantitative skills, and attitudes about pupils actually characterized the members of the 1965-1966 NDEA Counseling and Guidance Institute. It can further be implied that fairly varied personality characteristics were shown by group members.
2. Since the faculty members adjudged the subjects differently in terms of counselor effectiveness, it can be implied that the subjects were, in fact, demonstrating varying degrees of counselor effectiveness.
3. Since coefficients of correlation, significant at or beyond the .05 level of confidence, were found between rankings of effectiveness and twelve tests and sub-tests previously listed, it can be implied that scores on these dimensions would have served as valid predictors of counselor effectiveness in the selection of participants for the 1965-1966 NDEA Counseling and Guidance Institute at Atlanta University.

Recommendations.--On the basis of the conclusions and implications of this study, it is recommended:

1. That the selection criteria for attending NDEA Institutes

at Atlanta University include several aspects of mental functioning. The Otis Quick-Scoring Mental Ability Test and the Ohio State Psychological Examination should be considered as well as the presently used GRE and MAT.

2. That the selection criteria not include the Minnesota Multiphasic Personality Inventory. Only the Sociability scale of the Guilford-Zimmerman Temperament Survey, and only the Abasement, Endurance, Dominance, and Heterosexuality scales of the Edwards Personal Preference Schedule should be included in the criteria.
3. That further study be made of the Minnesota Teacher Attitude Inventory. Efforts should be made to establish norms for counselors.

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